Web Base

A collection of websites were obtained through a keyword search "microburst" during the summer of 2003. Sites are categorized into fourteen subsections and organized alphabetically. Each lists a brief statement of the site's intent and/or comments. Summaries are directed to aid operational forecasters in nowcasting/forecasting microburst activity.

Categories:

AMS
Army/Navy/Coast Guard
Educational
FAA/Aircraft
International
Miscellaneous
NASA
Newspapers/TV
NOAA/NWS/NWA
Personal
Research Labs/Universities
State(USA)/Gov't
UCAR/NCAR
Vendor/Commercial

AMS

http://ams.confex.com/ams/SLS_WAF_NWP/21SLS/abstracts/47169.htm
In-depth polarimetric radar study of microburst event moving over the region of Severe Thunderstorm Electrification and Precipitation Study (STEPS).

http://ams.confex.com/ams/annual2002/techprogram/paper_25055.htm
Brief description on how a pilot can avoid an encounter with a microburst according to Embry-Riddle Aeronautical University.

ARMY/NAVY/COAST GUARD

http://www.army.mil/soldiers/dec95/p32.html
Event in Fort Drum, New York (December 1995). Storm description and plan of action for taking safety during microburst activity for the army base. No scientific commentary.

http://www.lockheedmartin.com/syracuse/lit_center/images/MCROBRST.PDF
Naval Electronics and Surveillance Systems. Radar used to detect dry microbursts. In-depth description and parameters of Microburst Radar (MBR). Pictures of radar.

http://www.cgaux.org/cgauxweb/operations/ops02-04.pdf
National Operations Department of the US Coast Guard Auxiliary. Information for boaters about dangers of microbursts.

http://www.cgaux.org/cgauxweb/operations/ops99-9.pdf
Coast Guard Auxiliary. Describes what a microburst is and how boaters may detect and protect themselves.

EDUCATIONAL

http://ww2010.atmos.uiuc.edu/%28Gh%29/guides/mtr/svr/comp/out/micro/home.rxml
Educational diagrams/discussions on microburst and pictures from Lubbock, TX area.

http://archive.ncsa.uiuc.edu/SDG/DigitalGallery/MBURST.html.abak
Computer animation of colliding microbursts (similar situation from the Dallas Fort Worth accident on 2 August 1985). Researchers/references included (University of Wisconsin and University of Oklahoma).

http://www.carlyecalvin.com/microburst.html
NCAR exhibit for understanding microbursts. Links to UCAR site, new microburst detection systems, and aviation related products.

http://www.earthstation.com/todo/microdemo_results.html
An at home example of a microburst that everyone can do (coffee cup). Gives materials needed and a simplified explanation (KMBC – TV Kansas City, MO).

http://www.earthstation.com/todo/microburst.html
Brief explanation of why and how a microburst forms. Procedure and material listing of example above with an aquarium instead of the coffee cup example (KMBC- TV Kansas City, MO).

http://www.australiansevereweather.com/photography/microb02.htm
Website by public with great pictures of microburst events in Australia. Definitions and pictures of various weather events (e.g., forest fires, hail, lightning, tornadoes).

http://www.sunysuffolk.edu/~kremm43/
Student research paper for an introductory weather class. Includes history, formation, detection, safety, and causes of microbursts. Pictures and graphics.

http://www.enc.org/resources/records/full/0%2C1240%2C008665%2C00.shtm
Eisenhower National Clearinghouse. Link to University of Illinois site with an animation of a microburst. Animation is similar to the 2 August 1985 Dallas Fort Worth, TX (DFW) aircraft accident. Other animations include thermal convection, hurricane, and jet stream.

http://www.mos.org/learn_more/ed_res/cheapbook/downdraft/
Science and Technology Interactive Center (SCITECH) education of microburst page for teachers and young students. Simulation of a downdraft for a grade teacher (grades 4-8). Also background information for the teacher and procedure of experiment.

FEDERAL AVIATION ADMINISTRATION (FAA)/AIRCRAFT

http://www.academy.jccbi.gov/catalog/html/57024.htm
Course description in the FAA catalog of training. Information about microbursts, low level wind shear, and how to fly through.

http://flytristar.tripod.com/page/accident.html
List of Tristar airplanes that have been in accidents. One of which encountered a microburst at Dallas Fort Worth, TX (DFW) 2 August 1985. Description of what the plane experienced and what damage occurred.

http://www1.faa.gov/ats/atb/sectors/surveillance/420/programs/llwas.cfm
Low Level Wind Shear Alert System (LLWAS). Used at airports to detect wind shear especially during microburst events. Also links to Terminal Doppler Weather Radar (TDWR), Next Generation Radar (NEXRAD), and Weather Systems Processor (WSP).

http://www.airdisaster.com/cvr/transcripts.shtml
Aircraft crash listing and cause of crash. Listing of a microburst incident (Martin Air USA to Costa Rica). Includes text of recording of Air Traffic Control-Pilot conversation during flight.

INTERNATIONAL

http://www.atsb.gov.au/atsb/media/mrel026.cfm
18 January 2001 event in Brisbane, Australia. Australian Transport Safety Bureau (ATSB) discussed the problems a 737 Boeing Jet encountered while trying to land in Brisbane and how the pilots handled the situation.

http://www.smc-msc.ec.gc.ca/projects/nrp/product8_e.cfm
Environment Canada site. National radar project. In depth discussion of radar techniques used in the detection of microbursts. Includes sample products using: Vertical Integrated Liquid (VIL), Radial Velocity (VD), and a Severe Weather Probability product (VIZ).

http://www.ipmet.unesp.br/publications/p6.9_figures.htm
14 May 1997 and 17 October 1997 events in Brazil. Range Height Indicator (RHI) and Plan Position Indicator (PPI) images of microburst producing storm. Link to paper associated with radar imagery (In Spanish).

http://www.ontariostorms.com/1999/july/24/
24 June 1999 Ontario, Canada event. Public website with examples of storm events including microburst event (numerous pictures). Public summary of storm with damage reports from various cities. Radar imagery, lightning map, and Convective Available Potential Energy (CAPE) imagery are included (from NOAA and weathertap.com).

http://www.ontariostorms.com/special.html
Links to other severe storm events that public has captured radar images and pictures. Microburst site available is located in previous website (24 July 1999).

http://www.engga.uwo.ca/people/esavory/Engstruct.pdf
University of Western Ontario paper: "Modeling of Tornado and Microburst Induced Wind Loading and Failure of a Lattice Transmission Tower." Includes graphics and mathematical explanation of tornado and microburst events as well as tower structure weaknesses.

http://www.rnw.nl/science/html/aircraft991105.html
Radio Netherlands. Discusses various microburst events overseas and in the United States. Also describes how to fly through a microburst based on research.

http://www.imd.ernet.in/serc.htm
A university in India that offers a class in aviation meteorology that teaches students about microbursts and how to operate an aircraft in microburst activity.

http://campus.uab.es/~2014361/Pospos/downburst/downburst.htm
University in Barcelona, Spain. Diagrams of microburst events to help explain the microburst definition. Intensity classifications of downbursts.

http://www.unet.univie.ac.at/~a9600149/tornado/index_e.html
Site of tornadoes in Austria. Link to picture of downburst damage.

http://ftp.uni-paderborn.de/aminet/dirs/pix_mpg.html
Germany's internet collection of software which includes a microburst animation.

http://www.hkalpa.net/alpa/minutes/WS-turb-booklet-web-ver.pdf
Wind shear and turbulence guide for Hong Kong pilots by the Hong Kong Observatory. Describes what causes wind shear, turbulence, and similar in the Hong Kong area.

http://anusf.anu.edu.au/annual_reports/annual_report96/AR3_html_96/Christie.html
Australian National University. Work done on compressible fluids. Modeling to study the boundary layer and the propagation of solitary waves. Microburst induced waves have been studied and modeled. Description of study, results, and future plans.

http://www-das.uwyo.edu/~geerts/papers/waf_gusts/
Case study (July 2000) in New South Wales, Australia on estimating surface wind gusts caused by thunderstorm. In-depth analysis of climatology data and WINDEX values.

http://www.airmanshiponline.com/fall2000/12Thunderstorm%20Encounters%20In%20The.htm
Airmanship Magazine (Italy). Two aviation events (Washington D.C. and Chicago) with a full description of what the pilot/aircraft encountered and how they survived the microburst.

MISCELLANEOUS

http://www-personal.engin.umich.edu/~adogan/Papers/atilla_dogan_academic.pdf
Resume of published professor, Dr. Atilla Dogan (publications included).

http://www.cs.mu.oz.au/~sandy/
Personal Australian scientist webpage (publications included).

http://www.mme.wsu.edu/~grantham/wjg_pubs.html
Publications of Walter J. Grantham, a professor at Washington State University. Some of his publications include microburst activity. Example: Dallas Fort Worth, TX (DFW) microburst event: 2D Multiple Vortex Model.

http://www.wind.ttu.edu/Library/Publications/Fujita_pubs.htm
Texas Tech University's listing of Fujita publications. All publications and tech reports relating to microburst, downburst, and downdraft can be found in the publications file of this study.

http://www.bom.gov.au/bmrc/wefor/staff/sandy/sdance.htm
Sandy Dance's publications on microburst activity.

http://www.tacc.utexas.edu/~kelly/resume.html
Resume for University of Texas Scientific Visualization Manager. Microburst publications are included using software to model microburst events.

http://www.tacc.utexas.edu/~kelly/kelly_resume.pdf
Same resume as http://www.tacc.utexas.edu/~kelly/resume.html (PDF version).

http://www.albany.edu/cpr/stewart/
Biography on professor, Thomas Stewart, at University of Albany. Publications included on microbursts.

http://www.weather.nps.navy.mil/faculty/pubs2002/McCarthy-CV.html
Resume of research professor at naval post graduate school (publications included).

http://www.mae.cornell.edu/Psiaki/psiaki_papers.html
List of papers and publications of scientist Mark Psiaki of Cornell University.

http://www-personal.engin.umich.edu/~adogan/research.htm
List of publications already listed in:
http://www-personal.engin.umich.edu/~adogan/Papers/atilla_dogan_academic.pdf

http://www.princeton.edu/~stengel/RobPubs.html
Princeton University professor Robert Stengal's publications related to microbursts.

http://ae.atmos.uah.edu/AE/refs.html
Bibliography of Monte Bateman, NASA scientist, of related cloud physics/microburst papers.

NASA

http://techreports.larc.nasa.gov/ltrs/PDF/NASA-93-17csls-fhp.pdf
Case study in Denver 8 July 1989 of pulsating microburst with radar reflectivity, velocity differential profiles, and sounding.

http://techreports.larc.nasa.gov/ltrs/refer/93/NASA-93-17csls-fhp.refer.html
Abstract to Denver case study in website above (8 July 1989).

http://www.nasatech.com/Briefs/Apr98/0498PTB2.html
MAD (Microburst Automatic Detection) device to be used in order to increase aviation safety. Detects wind shear/turbulence and can adjust parameters for topography and atmospheric conditions.

http://quest.arc.nasa.gov/people/journals/aero/coppenbarger/micro.html
Article on the problems pilots face while flying through Clear Air Turbulence (CAT) and strong downbursts. Explanation of the common mistake pilots make in their techniques while flying through these conditions.

http://oea.larc.nasa.gov/PAIS/Windshear.html
Full description and visuals on wind shear detection systems used on airplanes. Discussion on how wind shear affects airplanes. Graphic of onboard wind shear warning system.

http://rsd.gsfc.nasa.gov/goes/text/goesds.html
GOES data servers. Includes a link to microburst related site available at http://orbit-net.nesdis.noaa.gov/arad/fpdt/mb.html (also under NOAA subsection of this document).

NEWSPAPERS/TV

http://www.mtexpress.com
Idaho Mountain Express (Ketchum, ID) 9 August 2000 event. Storm events and damage reports from eyewitnesses. No scientific commentary is added.

http://www.amarillonet.com
Amarillo Globe News (Borger, TX) 30 July 2002 event. Eyewitness reports of storm and damage by public (1 picture). No scientific commentary. Area on the website to submit questions or comments concerning the event.

http://www.vernal.com
The Vernal Express (Vernal, UT) 21 June 2002. Damage and storm description by public (1 picture). No scientific commentary is added.

http://www.thehollandsentinel.net
The Holland Sentinel (Holland, MI) 1 June 1998. Storm reports by local meteorologist. Also, brief explanation by meteorologist of what a microburst is and why it occurred.

http://www.thehometownchannel.com
KHBS-KHOB TV (Goshen, AR) 21 October 2001 event. Summary of National Weather Service representatives visiting the city to determine if it was a microburst. Representatives say damage is due to straight-line winds. No scientific commentary included (1 picture).

http://www.newschannel9.com
WTVC-Chattanooga, TN 21 September 2000 event. Storm damage reports by public. No scientific commentary and no pictures.

http://www.post-gazette.com
Pittsburgh Post-Gazette (Pittsburgh, PA). 31 May 2002 event. Public description of damage and recovery from damage caused. No scientific commentary is added (1 picture).

http://www.carlowden.com
2 August 1995 Denmark event. Paragraph describing the damage done on a golf course reported by public. No pictures or scientific commentary.

http://groups.msn.com
Events called white squalls that cause boats to sink or wash ashore could be associated with microburst activity. Site includes pictures, many stories told about these events, as well as a USA Today link on what a microburst is and how it affects aircraft.

http://www.pbs.org
NOVA-TV brief non-scientific explanation on what low level wind shear/microburst is and how airports notify pilots using Low Level Wind Shear Alert System (LLWAS).

NOAA/NWS/NWA

http://www.wdtb.noaa.gov/workshop/psdp/Roeder/index.htm
Paper on forecasting wet microbursts. Includes outlook tools, intermediate tools, and nowcasting tools. Mathematical explanation of equations used to forecast wet microbursts (WINDEX, Microburst Dry Potential Index-MDPI). Satellite, Radar, and cell trend discussions with tables and references included.

http://www.wdtb.noaa.gov/workshop/psdp/modules.htm
Provides links to Roeder wet microburst forecasting site, dry microburst forecasting site, hybrid downburst (macroburst) site. Also includes links to other downburst links that are associated with this literature.

http://www.srh.noaa.gov/shv/Downburst_Climo.htm
Technical memo (July 1996-97), warning guidelines from a single cell thunderstorm database. Model of single cell thunderstorm with graphs of data recorded during event.

http://orbit-net.nesdis.noaa.gov/arad/fpdt/mb.html
Microburst products such as WINDEX, Dry Microburst Index (DMI), Microburst Dry Potential Index (MDPI). Links to current observations using these products in United States.

http://orbit-net.nesdis.noaa.gov/arad/fpdt/new.html
List of changes to GOES microburst products.

http://www-frd.fsl.noaa.gov/mab/microburst/
Link to a microburst visual indentification handbook. Also a short summary of wet and dry microburst prediction.

http://www-frd.fsl.noaa.gov/mab/microburst/micro_course.html
Link located in above site (titled "Forecasting Microbursts and Downbursts").

http://www.mediapolis.es/TETHYS/set-jef/P9/Caracena.doc
Journal article discussing the history of the microburst and the physical properties of the wet, dry, and multiple microburst events. Dynamic equations for downdraft physics.

http://www-frd.fsl.noaa.gov/mab/microburst/links.html
Links to other microburst related websites that include University of Nebraska at Lincoln schematics and explanation, Utah event (radar imagery), Washington Post wet microburst definition, aerial damage survey of event in Kansas City, MO and paper "Extreme Convective Windstorms" by C. Doswell.

http://www.srh.noaa.gov/jax/events/may27.html
27 May 1997 event in south Georgia and northern Florida. Radar images, zone forecasts, local area discussions, and storm reports from the event.

http://www.srh.noaa.gov/ftproot/topics/attach/html/ssd97-6.htm
Technical Report on forecasting dry microburst potential using WINDEX. Short case study in Lubbock, TX (4 July 1995), with surface and upper level maps, WINDEX map, and sounding.

http://www.wrh.noaa.gov/wrhq/LITETAs/TALITE9612/talite9612.html
Salt Lake City, Utah event on 8 June 1996. Only Radar imagery.

http://www.wrh.noaa.gov/wrhq/97TAs/TA9721/TA97-21.html
Technical report on dry microburst for the western region of the US. Analysis of event on 9 June 1996 in Utah. Includes radar imagery and time series plot of wind speed.

http://www.wdtb.noaa.gov/old/psdp/Roeder/ref.htm
References to Roeder's forecasting wet microburst site.

http://www.wdtb.noaa.gov/resources/cases/mbcase/mbcase.htm
Case study of dry event (8 June 1996) Salt Lake City, UT. Analysis of evolving mesoscale event and relevance to prediction. Radar imagery and other analyses.

http://www.crh.noaa.gov/mkx/slide-show/tstm/slide16.html
Slide show of various weather events. Wet microburst dissipation included. No scientific commentary is added to the slide show.

http://www.boi.noaa.gov/training/convection/drynotes.htm
Scientific advice on how to locate a microburst using meteorological knowledge. Link to a short description on forecasting and locating microbursts using radar imagery.

http://www.nwsla.noaa.gov/photos.html
18 April 2000 event in Los Angeles, CA area. Damage pictures, radar imagery, and NOAA definition of microburst.

http://www.crh.noaa.gov/eax/plaza.htm
Kansas City, MO event 6 August 1996. Complete description of storm events using radar imagery. Infrared satellite and radar imagery during storm.

http://www.nwas.org/committees/avnwxcourse/teachl5.htm
Course lecture for aviation students. In-depth discussion on what a microburst is and various detection systems that are being used by the Federal Aviation Administration (FAA).

http://www.spc.noaa.gov/publications/evenson/dry.htm
Analysis of being able to forecast dry microbursts through studying a favorable environment. Includes soundings, table, and forecast maps of boundary layer and upper air properties of favorable environments.

http://205.156.54.206/im/imup0797.htm
Description of new GOES product (1997) that offers WINDEX color-coded values.

http://tgsv5.nws.noaa.gov/er/okx/Skywarn/microburst1-2_files/microburst1-2.html
Newsletter of the Skywarn program with facts about weather radio, being a storm spotter, and information on watches and warnings.

http://tgsv5.nws.noaa.gov/er/cae/svrwx/downburst.htm
Columbia, SC site that describes everything to know about downbursts/microbursts in terms for the general public. Topics include the difference between a microburst, macroburst, tornado, and how to identify each visually with diagrams for better understanding.

http://www.nwn.noaa.gov
Link to the National Weather Service in Los Angeles/Oxnard, CA that have photos of microburst damage.

http://www.stormtrack.org/library/damage/nashvill.htm
Nashville, TN tornado event. Reference to a microburst is included.

http://www.fsl.noaa.gov/~osborn/DUG_Sect_5.html
Advanced Weather Interactive Processing system. Can manipulate Skew-T to select certain atmospheric conditions. Steps of how system works under different conditions.

http://www.photolib.noaa.gov/nssl/nsind2.htm
NOAA library of pictures. Includes weather phenomena and microbursts.

http://www.weatherwise.org/qrindex.html
Weatherwise magazine's list of questions about weather phenomenon. Question and answer forum on the difference between microburst and downburst.

http://www.erh.noaa.gov/er/okx/Skywarn/microburst1-1.html
Skywarn newsletter titled "The Microburst" Spring edition. Similar information as:
http://tgsv5.nws.noaa.gov/er/okx/Skywarn/microburst1-2_files/microburst1-2.html

http://www.wrh.noaa.gov/Phoenix/general/skywarn/index.html
Arizona Skywarn Storm Spotter program and Storm Spotter guidelines. Helpful pictures to identify weather by sight, including microbursts.

PERSONAL

http://www.mccormickranchpoa.com/storm.htm
14 July 2001 event in Scottsdale, AZ. Storm damage pictures. No captions or explanations.

http://www.libby.org/~mhend/MyMontana/micro.html
Montana 21 July 1997 event. Microburst definition with damage pictures and non-scientific commentary.

http://www.sonic.net/~pjkelly/tsmicro.html
Public (pilot/glider) site with information for public and fellow gliders on what a microburst is, wind shear, visual identification, and headwinds.

http://www.stereovisionengineering.net/pliu/SURFWAS.htm
Independent consultant Peter Liu's paper/study on the Surface Weather Alert System (SURFWAS) to detect microbursts. Includes visuals of instrument and also graphics of the instrument collecting data.

http://www.cybervox.org/pawx/082498.htm
Pennsylvania (24 August 1998) event. Description of observed incoming storm from information acquired by the web host from unknown source. Commentary of damage in Ohio and Pennsylvania. Includes radar imagery of event.

http://www.stormchase.net/brush.htm
Brush, CO 9 July 2001 storm pictures. Anticipated microburst event did not occur.

http://www.stormchase.net/ashley.htm
9 July 2002 Ashley, ND storm pictures (wet microburst picture).

RESEARCH LABS/UNIVERSITIES

http://www.cimms.ou.edu/~doswell/microbursts/Handbook.html
A handbook to assist a storm spotter in identifying a microburst event. Includes definitions and pictures of physical events during a microburst.

http://www.cimms.ou.edu/~doswell/microbursts/Additions.html
Addition to handbook above. All pictures of microburst events and some commentary.

http://hpccsun.unl.edu/nebraska/wind_events.html
Scientific classifications of various microbursts. Links to technical reports and journal articles on thunderstorm activity and microbursts.

http://severewx.atmos.uiuc.edu/21/online.21.2.html
University of Illinois at Urbana-Champaign. Radar imagery (base velocity) loop of microburst event on 9 June 1996.

http://rossby.metr.ou.edu/~tblove/micro.html
Oklahoma University site containing website links with articles, case studies, and guides to microburst prediction.

http://www.damtp.cam.ac.uk/user/fdl/people/fd/Azreport.htm
University of Cambridge paper on a lab experiment studying vortex rings caused by strong downbursts. Mathematical explanation of observed variables. Comparison of model data with microburst observations.

http://dryas.atms.unca.edu/
Professor at the UNC-Asheville studying flanking lines of thunderstorms. Supercell graphics and animations. Gust front/microburst graphics and animation. Flanking line and outflow preprint as well as power point presentation used at a conference.

http://aurora.aos.wisc.edu/~chris/MafMicro/
University of Wisconsin-Madison. Dry microburst event in Midland, TX. (19 September 2001) METAR observations as well as radar imagery.

http://www.marine.usf.edu/nws/satmet/tbwsatmet.html
University of South Florida satellite imagery page. Includes all products of satellite imagery. Site is a focus on the southeastern US and Florida. Microburst related imagery such as updated WINDEX measurements across Florida, Lifted Index (LI) loop of US, and latest Microburst Prediction Index (MPI) measurements for Florida.

http://www.met.tamu.edu/class/Metr304/Severedir/severe-wx-stu.html
Basic explanation of severe storm characteristics. Includes graphical definition of a microburst.

http://www.esf.edu/centerweb/bridgen1.htm
College of Environmental Science and Forestry (New York). Microburst event on 15 July 1995 destroyed 350 acres of a 2800 acre forest in northern New York State. Site includes forestry plans to rebuild the forest.

http://redrock.ncsa.uiuc.edu/AOS/publications/SLS02/orf.gfmb.pdf
Paper written by Leigh Orf of UNC-Asheville. In depth nonhydrostatic subcloud model used to study the behavior of gust front and microburst collisions.

http://www-das.uwyo.edu/~geerts/cwx/notes/chap09/sr185.htm
Technical memo on issuing warnings of severe storm activity. Brief explanation of ordinary (single cell) dry and wet microburst events.

http://redrock.ncsa.uiuc.edu/AOS/home_pubs.html
Link to colliding gust front and microburst paper done by Lei Orf:
http://redrock.ncsa.uiuc.edu/AOS/publications/SLS02/orf.gfmb.pdf

http://kkd.ou.edu/METR%202603/metr2603lecture28.htm
Lecture notes on thunderstorm forecasting and thermodynamic diagrams. Many links were inactive at time of access.

http://www2.ncsu.edu/eos/service/pams/meas/sco/research/nws/training/mcs/mcs.html
Scientific review of Mesoscale Convective Systems (MCSs). Event in North Carolina (25 May 2000) MCS produced microburst and derecho event. National Weather Service report included.

http://www.atmos.uiuc.edu/~jewett/Atmos120/Day13/
Lecture material for a professor out of University of Illinois-Urbana. Includes pictures diagrams and animations of a dry microburst.

http://people.aero.und.edu/~rinehart/fig5.html
University of North Dakota. Radar image showing the difference in velocity fields of a microburst and thunderstorm.

http://www.cira.colostate.edu/ramm/GIMPAP_Project/Ellrod_report3rd02.html
Colorado State University aviation project in order to improve, develop, and evaluate products or techniques from GOES and use them to discover a better understanding of aviation hazards (dry microbursts). Includes graph and satellite imagery.

http://paos.colorado.edu/~curryja/aerosonde/BAMS-fig4.html
University of Colorado. Graph of Aerosonde behavior in or near microburst at Port Hedland.

http://oas.okstate.edu/ojas/tidwell01.htm
Oklahoma State University. Scientific laboratory simulation of a thunderstorm downburst. Models of decreasing updraft, converging downflow, barrier, and overshooting tops are studied.

http://homepages.mohave.edu/science/clouds/cloudsstorms.html
Mohave Community College in Arizona. Pictures of dry microburst events.

http://www.gecat.com/dc_10.asp
General Electric Company Capitol Aviation Training. Simulator training course of a DC-10 plane with extensive practice in microburst flying techniques.

http://www.gecat.com/md_80.asp
General Electric Company Capitol Aviation Training. Simulator training course of a MD-80 plane with practice in microburst.

http://weather.unl.edu/educational_links.html
Various research links as well as areas of meteorology: severe storms, dynamic, operational, climatology. Links already included in:
http://www-frd.fsl.noaa.gov/mab/microburst/Welcome.html
http://www.wdtb.noaa.gov/workshop/psdp/dmb/index_dmb.htm

http://www.colorado.edu/hazards/dr/dr353.html
Hazards encountered by various weather events. Question posed by National Weather Service employee about city plans for microburst warning or event.

STATE (USA)/GOV'T

http://www.nhoem.state.nh.us/mitigation/fig%203-12.htm
Statahan, NH 18 August 1991 event. Pictures and definitions of microburst vs. macroburst vs. tornado damage in New Hampshire.

http://www.ofcm.gov/atd_dir/pdf/extract018.pdf
Office of Federal Coordinator for Meteorology. Scientific air quality models of various atmospheric conditions (urban heat island, complex terrain, thunderstorm outflow, and high velocity wind phenomenon such as a hurricane, tornado, or microburst).

http://www.glendaleaz.org/eoc/
Official site of Glendale, Arizona. Telephone emergency system in case of disastrous event. Microburst emergency call received.

http://www.aes-tx.org/art.html
Amarillo Emergency Service. Pictures of thunderstorm events as well as movie of a microburst event.

http://www.agu.org/revgeophys/smull01/node4.html
American Geophysical Union. Notes/brief paper on convective initiation of severe weather. Detailed analysis with only written text (references included).

http://www1.roanoke.com/smithmountainlake/sailing/gardner/957.html
Event on Lake Norman in North Carolina (6 May 1989). Sail boat race interrupted by microburst event. Public commentary of event and aftermath.

UCAR/NCAR

http://www.comet.ucar.edu/modules/mod8/index.htm
Anticipating Convective Storm Structure and Evolution: Contains a hodograph tutorial as well as other concepts covering isolated severe convective storms.

http://www.meted.ucar.edu/mesoprim/cape/index.htm
Buoyancy and CAPE: 1-hour module introductory review of important processes and measures as they pertain to forecasting convection.

http://www.meted.ucar.edu/convectn/csmatrix/index.htm
A Convective Storm Matrix: Buoyancy/Shear Dependencies: Interactive exercise and resource for determining likely isolated storm structures and evolution.

http://www.comet.ucar.edu/class/satmet/schmit/sounder.html
COMET course index (COMET Satellite Meteorology Course). One link to microburst dealing with one satellite/WINDEX overlay.

http://meted.ucar.edu/convectn/w41/
Course in using sounding information along with hodographs, profilers, radar, and model data to forecast a favorable mesoscale environment for convection. Three cases, one of which includes the prediction of a dry microburst.

http://www.comet.ucar.edu/outreach/0019124.htm
Final report of a report done by Penn State and National Weather Service on precursor identification of microbursts using WSR-88 data. Summary of benefits and problems with project included.

http://www.mmm.ucar.edu/pdas/Ops-journal/ops-summary.html
Storm event summary for Severe Thunderstorm Electrification and Precipitation Study (STEPS). Includes two links to severe downburst activity. Links offer scientific commentary on storm characteristics and also radar imagery of each storm event.

http://mrd3.mmm.ucar.edu/pubs/Smull-IUGG_Review.html
Paper discussing the nature of mesoscale systems, how and why they develop in the tropical and warm season midlatitude atmosphere. Section on severe storms including microbursts.

http://www.fin.ucar.edu/legal/patents.html
List of UCAR systems. Includes enhanced microburst detection system (MDS) formally known as "fuzzy logic", and low level wind shear alert system.

http://www.page.ucar.edu/pub/education_res/presearch/met/radar.htm
Links to radar interpretations of microburst activity and other important radar images that can be used in microburst studies. Two of the microburst specified links were inactive at time of access.

VENDOR/COMMERCIAL/OTHER

http://ask.elibrary.com/
Electronic-Library. Microburst event in Lees Summit, MO. Offers a seven day trial to acquire the full article.

http://www.wdtinc.com
Weather Decision Technologies. Company supplies software for users to detect microbursts and gust fronts. Other software includes rain, hail, and damaging downburst predictors.

http://www.jvncomm.com
Computer software and hardware vendor. Products include various radar surveillance software as well as a weather system simulator. Simulator offers displays and animations of microburst, gust fronts, tornado vortex, and related.

http://www.tsc.com
Technology Service Corporation. Provide engineering consulting services and products to the US Government or industry. Products include computer software for radar siting, Geographic Information Systems (GIS), and sensor simulations. Examine the reliability of Terminal Doppler Weather Radar (TDWR) coverage for airports.

http://www.isotruss.com
Isotruss Structures, Inc. (Utah) build metal structures that are lighter, cheaper, and more efficient than wood. They guarantee their product can withstand hurricane and microburst force winds.

http://www.wdtinc.com/damagingdownburstpredictor.html
Weather Decisions Technology. Damaging downburst predictor. Link is already associated with: http://www.wdtinc.com/tdwrmicroburst.html

http://www.geophys.washington.edu/Space/SpaceExp/Rocket/microburst.html
Geophysical study of electronic discharges. This type of microburst is associated with auroras. Not related to the thunderstorm microburst.

http://www.tree-tech.com/techrpt/after_storm.html
Tree Tech Consulting. Explanation of microburst events in Pennsylvania, Delaware, and New Jersey. Multiple microbursts occurred due to a strong cold front. Brief description of how the company cleans up after the microburst events.

http://www.infodotinc.com
Integrated Publishing Company. Provide information from mathematics, engineering, computer science, weather, and similar. Weather link includes thunderstorm and low level wind shear information. Diagrams included to aid in understanding.

http://www.canard.com
Canard Aircraft Company. 7 August 1990 event in Los Angeles, CA area. Hot air balloons encountered microburst that caused some of them to force their landings. Description of weather event is added and how the seventeen pilots dealt with the situation.

http://www.canard.com
Canard Aircraft Company report of pilot attempting landing on body of water and encountered microburst (Alaska). Link can be found in above site.

http://ps2.hotgames.com/games/skyody/review.htm
Flight simulator Playstation2 game. Many levels in flying three different types of planes. Levels include many weather events such as snow, rain, wind, and microburst. Game was played by student worker and no sign of microburst yet encountered.

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